REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Status of the claims

Claims 6-9 and 11-28 were pending in the subject application, of which claims 20-22, 25 and 28 have been withdrawn from consideration by the Examiner. With this submission, claims 6, 8, 9, 13, 14, 16-19, and 23 have been amended. Claim 7 has been canceled and claims 29 and 30 have been newly added. Hence, upon entry of this submission, claims 6, 8, 9, and 11-30 will remain pending, of which claims 6, 8, 9, 11-19, 23, 24, 26, 27, 29 and 30 will be under active consideration.

Claim amendments

All of the claims have been amended to recite a mesenchymal "stem" cell, support for which may be found at least at page 5, last paragraph, and page 6, second paragraph, of the specification. All of the claims are now directed to the treatment of "neurological disease," support for which may be found at least at page 20, first sentence and also first paragraph.

With respect to new claims 29 and 30, support may be found at least on page 20, lines 4-6 (including "brain tumors" as "neurological diseases") and in Examples 32-44 (providing the therapeutic effect of the present invention on brain tumors).

Election/restrictions

Newly added claims 20-22, 25, and 28 have been withdrawn from consideration for allegedly being directed to an invention that is independent or distinct from the invention originally claimed. The Examiner's reasons for this position are set forth on pages 2-3 of the Office Action. Applicants respectfully traverse this restriction.

Traversal is based on the grounds that the Office has not shown a serious burden to examine all of the claims together. As set forth in MPEP § 803, there must be a serious burden on the Examiner if restriction is required. Insofar as the Office has not demonstrated such a burden, Applicants respectfully request that the Restriction/Election requirement be withdrawn.

Priority

The instant application has been granted the benefit date of 25 June 2004, which is the filing date of PCT/JP04/09386, to which the application claims benefit. However, the Examiner has not granted the application the benefit dates of either of the Japanese applications (nos. 2003-185260 and 2003-432329 filed 27 June 2003 and 26 December 2003, respectively), to which the application also claims benefit, ostensibly because an English translation of these priority documents have not been received by the Office.

Applicants have submitted with this Response an English translation of Japanese priority application no. 2003-432329.[1] Hence, Applicants respectfully request that the present application be granted a benefit date of 26 December 2003.

Claim rejections under 35 U.S.C. § 112

Claim 17 stands rejected under the first paragraph of 35 U.S.C. § 112 for allegedly failing to comply with the written description requirement. The Examiner alleges that the claims contain subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Specifically, the Examiner alleges that the specification does not teach "within" 72 hr, 24 hr, 12 hr, 6 hr, or 3 hr, but does teach "at" 3 hr, 6 hr, 12 hr, 24 hr, and 72 hr; or "after" 3 hr, 12 hr, and 72 hr.

Applicants have replaced the term "within" with "after" in claim 17. That said, Applicants respectfully submit that there is no basis for the Examiner distinguishing the description on page 21, lines 23-24 for Figure 3 (*i.e.*, "at" 3 hr, 6 hr, 12 hr, 24) from the description on page 22, lines 3-4 and page 23, lines 13-14 for Figures 6 and 18 (*i.e.*, "after" 3 hr, 12 hr, and 72 hr). Indeed, both of these descriptions refer to the time "after" cerebral infarction. In particular, Figure 3 describes the results of Example 6, wherein cells were administered 3, 6, 12, 24, and 72 hours "after" infarct induction. *See* page 21, lines 23-34; and page 32, lines 4-5 and 7-14.

Hence, withdrawal of the subject rejection is respectfully solicited.

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[1] In the course of translating the "priority" documents, Applicants learned that the claim of priority to Japanese application no. 2003-185260, filed 27 June 2003, was in error. A supplemental ADS is being submitted to remove the incorrect priority claim.

Claim rejections under 35 U.S.C. § 102

Mahmood

Claims 9, 11-15 and 17-19 stand rejected under 35 U.S.C § 102(b) as being anticipated by Mahmood *et al.*, Neurosurgery, Vol. 49, No. 5, November 2001: 1196-1204 ("Mahmood"). Because the Examiner has interpreted "mesenchymal cells" of the present invention to encompass "marrow stromal cells" taught by Mahmood, the Examiner alleges that Mahmood anticipates the present invention. Applicants respectfully traverse the rejection.

The claims, as presently amended, recite the use of mesenchymal stem cells. The "marrow stromal cells"[2] described in Mahmood or the "mesenchymal progenitor cells"[3] referred to by the Examiner and the "mesenchymal stem cells" of the present invention are distinct cell populations. Hence, even if the cells of Mahmood were capable of differentiating into brain cells such as microglia and astrocytes, such a determination would not necessarily detract from the fact that the cells of Mahmood and the cells of the present invention are different cell populations. Indeed, Mahood nowhere teaches that the "mesenchymal stem cells" of the present invention can differentiate into nerve cells.

With respect to the Examiner's allegation that the specification does not define "acute or hyperacute stage cerebral infarction" (claim 15), reference is kindly made to the description in Examples 17 and 18, wherein it is shown that the compositions of the present invention are effective in treating "hyperacute stage" cerebral infarction. As well, Applicants respectfully submit that the term is well understood by those of ordinary skill in the art, which understanding is consistent with the use of the term in the teachings of the noted Examples.

Hence, insofar as Mahmood is silent on mesenchymal "stem" cells, it cannot anticipate the present claims. Hence, Applicants respectfully request the withdrawal of this rejection.

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[2] In an effort to curb any confusion, it should be noted that both Mahmood's "marrow stromal cells" and the claimed "mesenchymal stem cells" are abbreviated as "MSCs" in the respective disclosures.

[3] The Examiner's statement that "[m]esenchymal progenitor cells are components of bone marrow stroma" is not supported by Mahmood. Page 10. And, even assuming it were, not all "progenitor" cell are "stem" cells.

Gold

The Examiner has maintained his rejections of claims 6-8 under 35 U.S.C. § 102(b) as allegedly anticipated by US publication no. 2002/0168766 to Gold *et al.* ("Gold") for the reasons of record. Applicants respectfully traverse this rejection. As with Mahmood, traversal is based on the fact that Gold does not teach the use of mesenchymal stem cells as claimed.

At the outset, Gold is directed to the use of primate pluripotent stem cells (*e.g.*, human embryonic stem cells).[4] Abstract and paragraph 0016. To the extent Gold teaches anything other than these pluripotent stem cells, Gold teaches the use of mesenchymal cells that have been differentiated from them. Paragraph 0100. Whatever the characteristics of these "mesenchymal cells," they cannot be the "stem" cells of the present invention. This is at least because Gold teaches "for therapeutic applications, it may be beneficial…to render cells histocompatible with the intended recipient," which suggests that the cells are immunogenic. Paragraph [0146]. The "stem" cells of the claimed invention, however, are not.

Furthermore, Gold teaches that the mesenchymal cells differentiated from human embryonic stem cells are especially appropriate for conditioning medium. At least as the "method" claims are concerned, the use of mesenchymal cells for conditioning medium has nothing to do with the claimed use of the cells.

Thus, Gold cannot properly anticipate the claims either.

Kazuhiko

Claims 6-9, 11-13, 15-19, 23-24 and 26-27 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Kazuhiko *et al.,* Molecular Therapy . Feb. 2004. 9(2): 189-197 ("Kazuhiko"). As noted above, the present application should properly be granted the benefit of Japanese priority application nos. 2003-185260 and 2003-432329, either of which antedate Kazuhiko. Hence, Kazuhiko is not "prior art," and withdrawal of the rejections based on same reference is respectfully requested.

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[4] One of ordinary skill in the art, of course, would readily appreciate that *pluripotent* "embryonic stem cells" are not identical to "mesenchymal stem cells," which have a more limited differentiation capacity.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. § 1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date April 13, 2008

By _____

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